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SUBJECT: THE SOUTH AFRICAN COAL INDUSTRY: PART III -- PLANS AND FACTORS INFLUENCING COAL PRODUCTION

REF: A) JOHANNESBURG 335 B) JOHANNESBURG 337

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11. (U) Introduction: This is the third of a four-part cable dealing with coal and the important role it plays in the South African economy. Part 3 provides information on some of the new and expansion projects underway and planned clean-coal developments. It reviews some of the policies and legislation applicable to coal and looks at the major opportunities and threats to the production and exports of South African coal. Reftel A contains a summary for all four parts. End Introduction.

Future Plans for Coal

- ¶2. (U) In light of Eskom's critical need to expand generation capacity, the next five years should see four coal-fired plants come on stream. Three plants with a total capacity of 3,540 MW are currently being brought back into service and the fourth is a 2,240 MW expansion to the 3,690 MW Matimba plant, located on the Waterberg field. Kumba plans to double its coal output by 2010, including increasing output from its Grootegeluk mine by 6.3 million tons per year to feed the Matimba expansion. Plans also include a new export coal mine of 10 million tons per year (probably also located on the Waterberg field), to come on stream in 10-12 years. Plans are linked to Kumba's participation in the Richards Bay Coal Terminal (RBCT) expansion, which would allow the company to increase exports to 3 million tons per year, and to the upgrading of the rail link to the Grootegeluk mine.
- 13. (U) Kumba Resources has also concluded an agreement with the Botswana Government to begin a pre-feasibility study for the development of the Mmamabula coalfield. This is the western extension of the Waterberg coalfield which hosts South Africa's largest coal operation and the world's largest coal beneficiation complex.
- 14. (U) Other coal companies intend expanding production to feed planned new Eskom power plants. Rio Tinto is exploring the coking and steam coal potential of the Limpopo coalfield, and a number of projects are underway to provide export coal for the RBCT expansion. The coal industry is confident that it can supply an additional 30 to 40 million tons per year for export and to meet the future needs of Eskom and Sasol. However, there is concern that South Africa's rapidly diminishing reserves of higher quality coal may not be able to sustain exports of 91 million tons per year for any length of time. Much reliance is being placed on new BEE and smaller scale producers to fill the

production gap and on technology to upgrade coal for export.

Clean Coal Technology

- 15. (U) More stringent controls on all forms of coal pollution are inevitable. Eskom's Executive Manager, Dr. Steve Lennon, has stated that any new coal plants will have to be based on state-of-the-art clean-coal technology and improve efficiency to ensure that less CO2 is emitted per unit of production. Established carbon capture and storage technology is not yet economically viable and require about 40% of the energy produced just to remove CO2. Major producers and users of coal, including Anglo Coal, BHP-Billiton and Eskom, are participating in the United States' FutureGen project. This project has as its goal the development and construction of a coal-based power plant that will produce near-zero emissions. A prototype plant is planned to be operational by 2012. Experience from this will be applied in South Africa.
- 16. (U) In the meantime, best-practice clean coal technologies, processes and operations are being evaluated. Eskom is operating an experimental in-situ underground coal gasification project at the Majuba colliery and is investigating the viabilities of coal-bed methane (CBM), fluidized bed combustion (FBC), combined cycle gas turbine (CCGT) generation, pressurized boilers and other developed and developing technologies. An immediate goal for Eskom is the management of supply and demand and the efficient use of electricity, which it claims will save the construction of a 3,600 MW plant over a ten-year period.

Legislation and Policy

17. (U) Since the ANC-dominated government was elected in 1994 it has enacted legislation aimed at transforming the South African labor market and the public and private sectors. This includes a host of general labor, equity, affirmative action and economic empowerment legislation aimed at propelling historically disadvantaged South Africans (HDSA) into the formal economy. Specifically, provided for are improved working conditions;

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upgrading skills; advantageous access to employment opportunities; and participation at all levels in the economy.

- 18. (U) The minerals industry is South Africa's most important economic sector and was the first targeted by the SAG for transformation and empowerment. The government's aim was and is to enable (initially through legislation) HDSA to play an increasing role in all aspects of the minerals sector, from which they were effectively excluded under apartheid legislation. Transformation was to be accomplished through The Mineral and Petroleum Resources Development Act (Minerals Act) and its appendages, namely the Black Economic Empowerment (BEE) Charter (Mining Charter) both took effect in May and August, respectively, of 2004. These were followed by a number of bills, including the Royalty Bill and the Beneficiation Bill that are still under consideration.
- 19. (U) The Liquid Fuels Charter (LFC) of 2000 was the first of many industry sector charters. It covered the oil industry from production and transportation to refining, retailing, skills development and procurement. Its main tenet was for 25% of equity and management control of all South African liquid fuel entities to be in the hands of black economic empowerment companies within 10 years (by 2010) and that the industry should facilitate the financing of such deals. In addition, the LFC required that a minimum of 25% of procurement expenditure be earmarked for BEE suppliers. It also stipulated that BEE investment should be broad-based and for the long-term; that deals should take place at market value; that quality and standards should not be compromised; and the BEE partners should add value to the undertaking. (Comment: To date, many BEE deals have not met these criteria. End Comment.)
- $\P 10.$ (U) The LFC was followed by the Minerals Act and the Mining Charter, both now in force, and the Royalty and Beneficiation

bills that are still to be finalized. The Act and Charter require that 15% of a company's South African assets, as measured by equity, production, management control or other, as spelt out in a 'score card', must be in the hands of black people by 2009 and that this be increased to 26% by 2014. The industry was also tasked with facilitating financing of BEE deals by up to \$15 billion to 2009 and a similar amount to 2014.

- 111. (U) The most confrontational aspect of the legislation was (initially) its focus on the transfer of mineral rights to state custodianship. The current areas of contention are the Royalty and Beneficiation bills. The early royalty discussion document proposed a 2% assessment on gross revenues (rather than on profits) for coal. The Benefication Bill is set to propose a minimum level of product upgrading before export. If not attained, the exporter could be required to pay some form of export duty. At time of writing neither bill has been finalized for public comment.
- 112. (U) Given that strategies to meet black empowerment targets have been implemented by the major coal companies throughout the past four years, the structure and productivity of the coal industry have remained largely unchanged. Currently, nineteen BEE coal companies have been allocated export entitlements through the RBCT, own more than 20% of coal production and, pending completion of BEE deals, Eyesizwe Coal could leap-frog Anglo Coal to become the biggest producer of South African coal.

Opportunities for South African Coal

113. (U) Sustained high prices for export coal, up some 42% since 2003, and the continuing growth of the domestic economy, have been good for all producers. Additional opportunities for coal could come from increased tonnage requirements from Eskom for its expanding coal-fired plants; increased coal exports to Europe and the rapidly growing economies of the Far East; as well as the possibility of additional coal-to-liquid (CTL) plants in South Africa. Because of the significant advantages of coal to the South African economy, the SAG has stated that coal will continue its dominant role as an energy source for the next four decades. This should provide industry stability and the opportunity to research and develop other forms of energy for transportation and to power industry.

Threats to South African Coal

114. (U) The expansion of coal exports will depend on a number of factors outside the control of South African producers. Exports to the EU countries, which accounted for 77% of total exports in

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2005, will depend on Europe's resolve to reduce the use of coal to combat climate change concerns versus cost considerations should oil prices continue to escalate. Germany and Poland remain heavily dependent on coal while Italy is converting some oil-fired plants to coal and British Coal's plan to reopen a colliery in South Yorkshire and to build a \$1.5 billion power plant equipped with technology to capture and store carbon dioxide.

- 115. (U) A further threat to South African coal exports is the EU Commission's proposed new regulatory framework for the Registration, Evaluation and Authorization of Chemicals (REACH). If implemented as is, the regulations would effectively embargo the import of raw and processed products containing any form of toxic or polluting elements, which could include coal. However, given current concerns regarding energy supply security, it seems that the EU will continue to use coal and is likely to employ clean coal technology (CCT) to control emissions.
- 116. (U) Major competition to South African coal exports is likely from Australia, Columbia and Indonesia, which produce higher quality steam coals. Nuclear power plants are also a competitive threat, given uranium's geographically-friendly

distribution - South Africa, Canada and Australia - and its minimal emissions. However, the current general distrust of anything nuclear could retard further development of nuclear energy.

117. (U) While alternative and renewable energy forms may pose a threat to coal (and other fossil fuels) in the future, mainly for off-grid power and as a supplement to liquid fuels, the South African focus is likely to be on developing clean coal technology and on commercializing the mini-nuclear power Pebble Bed Modular Reactor (PBMR), scheduled for production from 2013 onwards (a prototype has yet to be constructed). LUOMA-OVERSTREET